

Hitachi Deskstar® 7K500

HARD DISK DRIVES



500GB | 7200 RPM | ATA 133

Seemingly Infinite Storage

Highlights

- > 500GB capacity
- > PATA 133 interface
- > Rotational Vibration Safeguard
- > Smooth Stream™ Technology for enhanced video streaming
- > Optional low-power mode

Applications

- > Personal storage
- > DVD / HDD recorders
- > Digital video surveillance
- > Video editing arrays
- > Home NAS
- > Extreme PC Gaming

A/V Smooth Stream Feature Set

The Deskstar 7K500 is the second generation Deskstar drive to enable the host system to optimize storage of data. This is achieved by Hitachi's Smooth Stream™ Technology which gives the host control over the drive's error recovery process. This important ATA-7 Standards feature fine tunes the Deskstar to record and play multiple standard definition and high definition video streams.

Features and Benefits

	Feature / Function	Benefits
Capacity	500GB	Highest capacity available in the industry
		* 56 hours of HDTV broadcast, or
		* 125,000 high quality, 4 minute MP3 recordings
Performance	High interface transfer rates	Faster system boot-up
	SmoothStream™ Technology	Improved performance for A/V storage applications
	Rotational Vibration Safeguard	Optimum performance in multi-drive systems
Reliability	ECC and CRC protection	Data integrity enhanced throughout circuits
	Low power mode	Reduces system heat/cooling requirements
		Enables industry-leading acoustics
	Load / unload ramp	Protects user data when power is removed
Internal thermal sensor	Improves data integrity	

*Actual storage may vary depending on the compression rate applied.

Hitachi Quality and Service

The Hitachi Deskstar 7K500 extends the company's long-standing tradition of performance and reliability leadership. Hitachi's standardized features in desktop solutions enable fast transfer rates, low power utilization and quiet acoustics.

Hitachi is dedicated to provide a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs. Hitachi drives are backed by an array of technical support and services, which may include customer and integration assistance.

Hitachi Deskstar® 7K500

Product
Model names **Deskstar 7K500**
HDS725050KLAT80

Specifications

Configuration	Parallel-ATA
Interface	ATA 133
Capacity (GB) ¹	500
Disks / heads	5 / 10
Performance	
Data buffer ² (MB)	8
Rotational speed (RPM)	7,200
Media transfer rate (max. Mbits/sec)	817
Interface transfer rate (max. MB/sec)	133
Sustained data rate (MB/sec)	64.8 - 31 (zone 0 - 29)
Seek time, average (read, typical) (ms) ³	8.5
Reliability	
Error rate (non-recoverable)	1 in 10E14
Start/stops (at 40° C)	50,000
Availability ⁴	24/7
Acoustic	
Idle (Bels)	3.1
Power	
Requirement	+5 VDC (+/- 5%) +12 VDC (+10 %/-8%)
Dissipation	
Startup current (max. A)	2.0 (+12V) & 1.1 (+5V)
Idle (W)	9.0
Physical Size	
Height (mm)	25.4
Width (mm)	101.6
Depth (mm)	146
Weight (max. g)	700
Environmental Characteristics	
Operating	
Ambient temperature	5° to 55° C
Relative humidity (non-condensing)	8% to 90%
Shock (half sine wave, 2ms) (G)	55
Vibration (random (RMS)) (G)	0.67 for horizontal 0.56 for vertical
Non-operating	
Ambient temperature	-40° to 65° C
Relative humidity (non-condensing)	5% to 95%
Shock (half sine wave, 2ms) (G)	225
Vibration (random (RMS)) (G)	1.04 (XYZ)
RoHS compliant ⁵	Yes

¹ GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.

² Buffer capacity includes 271KB used for drive firmware.

³ Includes 0.3ms command overhead.

⁴ Low duty cycle, non mission-critical applications in PC, nearline and consumer electronics customer environments are different from application to application

⁵ RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment

Specific application environments such as temperature and duty cycle will affect the overall reliability rates. For specific application environment reliability rates, please consult Hitachi technical support.

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How to Read the Deskstar Model Number

Example:

HDS725050KLAT80 = 500GB/8MB cache

H = Hitachi

D = Deskstar

S = Standard (vs T for two-disk for example)

72 = 7200 RPM

50 = full capacity = 500GB

50 = model capacity = 500GB

K = generation code

L = height

AT = AT = ATA (or A3 = SATA 3.0Gb/s)

8 = 8MB buffer (or 6 for 16MB)

0 = Reserved

For more information:

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